**AP STAT- Ch. 4 and 5 practice for quiz**

1. Create a dotplot of the number of goals scored by each team in the first round of the California high school soccer playoffs. Then describe the distribution.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5 | 0 | 1 | 0 | 7 | 2 | 1 | 0 | 4 | 0 | 3 | 0 | 2 | 0 |
| 3 | 1 | 5 | 0 | 3 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 3 | 1 |

1. Create back-to-back stemplots of the following male and female heights. Compare & describe both distributions

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **MALE** | |  |  |  |  |  | **FEMALES** | | |  |  |  |
| 72 | 75 | 66 | 76 | 70 | 71 |  | 72 | 69 | 70 | 64 | 70 | 66 |
| 73 | 74 | 65 | 73 | 73 | 66 |  | 70 | 60 | 71 | 65 | 61 | 67 |
| 73 | 68 | 65 | 63 | 72 | 68 |  | 66 | 59 | 70 | 66 | 69 | 68 |
| 70 | 68 | 70 | 64 | 72 | 69 |  | 61 | 61 | 60 | 66 | 68 | 68 |
| 71 | 67 | 71 | 60 | 71 | 72 |  | 60 | 62 | 61 | 66 | 67 | 65 |

1. Find the 5# summary and create parallel boxplots for the heights of males and females in question #2
2. Create a frequency histogram of the following data. Describe the distribution.

Salaries of 2008 New York Yankees (in millions of dollars):

Rodriguez 28 Giambi 23.428

Jeter 21.6 Abreu 16

Petite 16 Rivera 15

Posada 13.1 Damon 13

Matsui 13 Mussina 11.071

Pavano 11 Farnsworth 5.917

Wang 4 Hawkins 3.75

Cano 3 Molina 1.875

Ensberg 1.75 Brackman 1.185

Betemit 1.165 Bruney 0.725

Traber 0.500 Cabrera 0.461

Hughes 0.406 Duncan 0.398

Henn 0.397 Kennedy 0.394

Karstens 0.393 Albaladejo 0.393

Ohlendorf 0.391 Chamberlain 0.390

Sanchez 0.390

1. Create a relative frequency histogram of the following data. Describe the distribution.

Heights (in cm) of 58 randomly selected Canadian students who participated in a survey

166.5 170 178 163 150.5 169 171 166 190 183 178 161

171 170 191 168.5 178.5 173 175 160.5 166 164 163 174

173 169 160 174 182 167 166 170 170 181 171.5 160

178 157 165 187 168 157.5 145.5 156 182 168.5 177 162.5

160.5 185.5 151 159 177 171 176 177 181 186

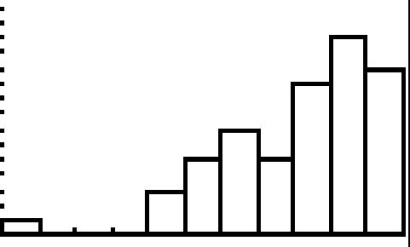
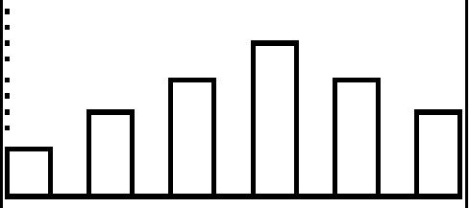
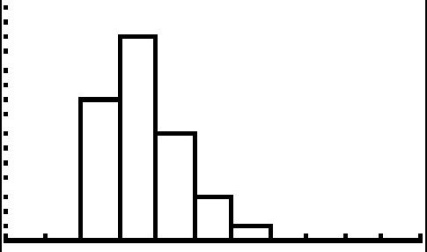
1. Create a cumulative frequency histogram of the data in question # 5 (the heights in cm).
2. Create a cumulative relative frequency histogram of the data in question #4 (NYY salaries).
3. Find the mean, standard deviation, 5# summary, and IQR of the following sets of data:
4. {4, 5, 7, 12, 14, 19, 20, 3, 4, 12, 11, 15, 18, 22, 23, 27, 30}
5. {45, 46, 80, 90, 99, 81, 74, 75, 66, 63, 54, 50, 59, 40, 33, 82, 85, 87, 93}
6. Look at the following data. Create a frequency histogram, determine which measure of center and spread you should report, and then describe the distribution.

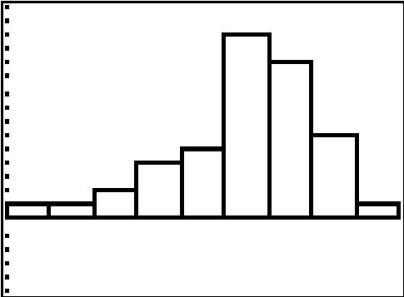
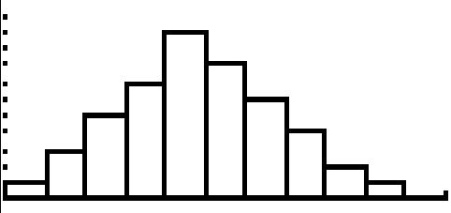
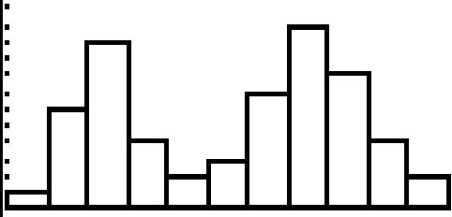
{20, 20, 21, 23, 24, 22, 25, 25, 25, 25, 26, 28, 30, 34, 38, 40}

1. Look at the following data. Determine which measure of center & spread are appropriate.

{ 60, 60, 60, 60, 60, 59, 59, 59, 58, 58, 58, 57, 57, 56, 56, 55, 55, 54, 53, 52, 50, 61, 61, 61, 61, 61, 62, 62, 62, 63, 63, 63, 64, 64, 65, 65, 66, 66, 67, 68, 69, 70}

1. Use the following data. {30, 30, 30, 30, 30, 30, 30, 30}
   1. Find the mean and standard deviation. Why is the standard deviation what it is?
   2. Change 2 numbers to so that the standard deviation is now approximately 5 units.
   3. Change these same 2 numbers so that the standard deviation is now approximately 10 units.
2. Describe the following distributions using the terms we learned in class. Scale on x-axis: (1, 12), bins = 1

1. Create a stemplot of the following data:

The percent of residents aged 65 and older in the States, 2007

Alabama 13.5 Alaska 7 Arizona 12.9 Arkansas 14

California 11 Colorado 10.1 Connecticut 13.5 Delaware 13.6

Florida 17 Georgia 9.9 Hawaii 14.3 Idaho 11.7

Illinois 12.1 Indiana 12.5 Iowa 14.7 Kansas 13

Kentucky 13 Louisiana 12.2 Maine 14.8 Maryland 11.8

Massachusetts 13.3 Michigan 12.7 Minnesota 12.2 Mississippi 12.5

Missouri 13.4 Montana 14 Nebraska 13.3 Nevada 11.1

New Hampshire 12.6 New Jersey 13.1 New Mexico 12.7 New York 13.2

North Carolina 12.2 North Dakota 14.6 Ohio 13.5 Oklahoma 13.3

Oregon 13.1 Pennsylvania 15.2 Rhode Island 13.9 South Carolina 13

South Dakota 14.3 Tennessee 12.9 Texas 10 Utah 8.9

Vermont 13.6 Virginia 11.8 Washington 11.7 West Virginia 15.5

Wisconsin 13.1 Wyoming 12.2

1. Use the following data:

{20, 23, 24, 27, 29, 31, 30, 33, 36, 37, 35, 40}

* 1. Calculate the following statistics:

Mean

Median

Range

IQR

Std. Dev.

* 1. Suppose we now add a new point to the data set: 60. Indicate whether adding the new point to the rest of the data made each of the summary statistics in part (a) increase, decrease, or stay about the same